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REMARKS

Claims 17-22, 24 and 26-35 are pending in this application. By this Amendment, Applicants amend claims 17, 20 and 35.

Claims 20-22 were rejected under 35 U.S.C. § 102(e) as being anticipated by Nishiumi et al. (U.S. 5,973,704). Claims 24 and 35 were rejected under 35 U.S.C. § 102(e) as being anticipated by Miyamoto et al. (U.S. 6,454,652). Claims 17-19, 27, 28 and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Han et al., "Character Image Restoration Based on Characteristic Points". And claims 29, 30 and 32-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Han et al. in view of Miyamoto et al. Applicants respectfully traverse these rejections.

Claim 20 has been amended to recite:

"An image processing device for situating objects in virtual space formed by a computer system, developing a game while **controlling the movement of said objects according to input control and set rules**, and displaying circumstances in said virtual space as the screen seen from a virtual camera, wherein said image processing device comprises:

determination means for determining whether or not said objects are in a predetermined area in said virtual space; and

camera angle adjusting means for adjusting the angle of said virtual camera based on the results of the determination by said determination means; wherein

the angle of the virtual camera is 0 degrees when said object is not in said predetermined area, and the angle of the virtual camera is adjusted by the camera angle adjusting means to a value other than 0 degrees when said object is in said predetermined area." (Emphasis added)

The Examiner alleged that Nishiumi et al. teaches determination means for determining whether or not said objects are in a specific area and camera angle adjusting means for adjusting the angle of said virtual camera based on the results. Applicants respectfully disagree.

In contrast to the present claimed invention and the Examiner's allegations, Nishiumi et al. teaches that the camera position is changed only if an obstacle is detected between a controlled object and the camera, whereas in the present claimed invention, the determination means determines whether or not said objects are in a

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predetermined area in said virtual space regardless of any obstacle position. Thus, Nishiumi et al. teaches determination means for determining whether an obstacle is located between a controlled object and the camera, NOT "determination means for determining whether or not **said objects are in a predetermined area** in said virtual space" (emphasis added) as recited in the present claimed invention.

Furthermore, the movement of the obstacle of Nishiumi et al. (which the Examiner alleged corresponds to the "object" recited in the present claimed invention) is clearly not controlled "according to input control" as recited in the present claimed invention, since the player has absolutely no control of the obstacles using input controls.

In the Response to Arguments section of the outstanding Office Action, the Examiner alleged that "it is inherent that if Nishiumi teaches determining means for an obstacle, i.e. an object, and the camera, Nishiumi is determining based upon the obstacle's position in a certain area." However, as noted above, the obstacle of Nishiumi clearly cannot be fairly construed as an object whose movement is controlled "according to input control" as recited in the present claimed invention.

Accordingly, Applicants respectfully submit that Nishiumi et al. fails to teach or suggest the unique combination and arrangement of elements recited in claim 20.

Claim 24 recites:

"An image processing device having an image generating display means for converting virtual space constructed with a three-dimensional model including a plurality of polygons to two-dimensional images seen from a virtual camera in any position, and displaying them on a display device, wherein said image processing device comprises:

angle computing means for computing the angle between an eye direction vector showing the direction in which said virtual camera is facing and a normal line vector showing the orientation of the plane of certain polygons situated in said virtual space; and

polygon tilting means for changing the coordinate values of the vertices of said polygons, so that the angle computed by said angle computing means assumes a desired value, such that the visibility of the polygons from the virtual camera is improved; wherein

the shape of an object formed by the polygons is modified such that the visible area thereof is increased." (Emphasis added)

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The Examiner alleged that Miyamoto et al. teaches angle computing means for computing the angle between an eye direction vector showing the direction in which said virtual camera is facing in a normal line vector, polygon tilting means for changing the coordinate values of the vertices of said polygons, and that Miyamoto et al. discloses determining directionality of a polygon by the normal vector and eye point.

However, contrary to the present claimed invention and the Examiner's allegations, Miyamoto merely teaches adjusting the angle of an upper body of a character in the game (e.g., the upper body of Mario). Miyamoto fails to teach or suggest "polygon tilting means for changing the coordinate values of the vertices of said polygons, so that the angle computed by said angle computing means assumes a desired value, such that the visibility of the polygons from the virtual camera is improved" wherein "the shape of an object formed by the polygons is modified such that **the visible area thereof is increased**" (emphasis added) as recited in the present claimed invention. The upper body of the character in the game (e.g., the upper body of Mario) is always the same size and shape regardless of the angle of the upper body.

In Miyamoto, the upper body of Mario merely slants or tilts depending upon its speed and direction, without changing the total surface area of the upper body. The surface area of Mario's upper body in Miyamoto does not change in size when it is tilted, e.g., merely slanting or tilting a polygon does not change the area of the polygon. If the area of the upper body of Mario in Miyamoto were to increase when the upper body is tilted, the appearance of Mario would be distorted, which is clearly not the case in Miyamoto.

In the Response to Arguments section of the outstanding Office Action, the Examiner has completely ignored Applicants' arguments regarding Miyamoto failing to teach or suggest that "the shape of an object formed by the polygons is modified such that **the visible area thereof is increased**" as recited in the present claimed invention, and as noted above, Miyamoto clearly fails to teach or suggest this feature.

Accordingly, Applicants respectfully submit that Miyamoto et al. fails to teach or suggest the unique combination and arrangement of elements recited in claim 24 of the

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present application.

Claim 35 has been amended to recite:

"A game device for situating objects in virtual space formed in a computer system, developing a game while controlling the movements of said objects according to input control and set rules, and displaying circumstances in said virtual space on a screen as seen from a virtual camera, said game device comprising:

polygons forming boundary lines of a game field situated along a reference plane serving as a reference in a virtual space such that the reference plane and the polygons have a predetermined, fixed relationship to one another; and

a position changing means for changing positions of said polygons to enlarge an area of said polygons according to the angle relationship between said virtual camera and said polygons, such that the visibility of the polygons from the virtual camera is improved." (Emphasis added)

The Examiner alleged that Miyamoto et al. teaches polygons forming planes in a game and camera modes for causing the camera angle to change to enable for a more distant view. However, claim 35 does **NOT** recite "polygons forming planes", but rather recites "polygons forming boundary lines of a game field".

In contrast, Miyamoto et al. merely teaches moving a virtual camera and changing the angle thereof. Miyamoto et al. clearly fails to teach or suggest any polygons forming boundary lines of a game field which are situated along a reference plane, and certainly fails to teach or suggest "polygons forming boundary lines of a game field situated along a reference plane serving as a reference in a virtual space such that the reference plane and the polygons have a predetermined, fixed relationship to one another" and "a position changing means for changing positions of said polygons to enlarge an area of said polygons according to the angle relationship between said virtual camera and said polygons, such that the visibility of the polygons from the virtual camera is improved" as recited in the present claimed invention. In contrast, the polygons of Miyamoto et al. are portions of objects, such as Mario, which clearly do **NOT** form boundary lines of a game field situated along a reference plane.

Accordingly, Applicants respectfully submit that Miyamoto et al. fails to teach or suggest the unique combination of elements recited in claims 35 of the present

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application.

Claim 17 as been amended to recite:

"An image processing device for situating objects in virtual space by a computer system, developing a game while controlling the movements of said objects according to input control and set rules, and displaying circumstances in said virtual space as the screen seen from a virtual camera, wherein said image processing device comprises:

polygons forming lines situated along a reference plane serving as the reference in said virtual space such that the reference plane and the polygons have a predetermined, fixed relationship to one another;

determination means for determining the positional relationship between said polygons and said virtual camera; and

polygon tilting means for tilting said polygons, according to the results of the determination, so as to increase the surface area of said polygons seen from said virtual camera to improve the visibility of the polygons from the virtual camera; wherein

said polygon tilting means only tilts said polygons when the polygons forming lines are at least a predetermined distance away from the virtual camera." (Emphasis added)

Claims 27, 28 and 31 recite features that are similar to the features recited in claim 17, including the emphasized features.

The Examiner alleged that Han et al. teaches polygons forming lines situated along a reference plane, polygons having a predetermined and fixed relationship to one another, determination means for determining the positional relationship and polygon tilting means for tilting the polygons. In addition, the Examiner alleged that it would have been obvious that the visual angle disclosed in Han et al. for viewing images would constitute a virtual camera for view images. Applicants respectfully disagree.

In contrast to the present claimed invention and the Examiner's allegations, Han et al. is directed to character image restoration to facilitate recognition of characters in a computer. Han et al. teaches an inverse transformation method for tilting characters. Han et al. fails to teach or suggest a virtual camera, polygons forming lines situated on a reference plane, determining the distance of the polygon edges based on the angle of the virtual camera and the line polygon vertices, and tilting the line polygons only when the line polygons are at least a predetermined distance away from the virtual camera. Thus, Han et al. clearly fails to teach or suggest "said polygon tilting means only tilts

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said polygons when the polygons forming lines are at least a predetermined distance away from the virtual camera" as recited in the present claimed invention.

In fact, Han et al. fails to teach or suggest anything at all about tilting the polygons based on the distance the polygons are from a virtual camera, and certainly fails to teach or suggest that line polygons could or should be tilted when the distance between the line polygons and the virtual camera is greater than a predetermined distance.

The Examiner's allegation that it would have been obvious that "the visual angle disclosed in Han for viewing images, would constitute a virtual camera, for viewing images" is clearly unsupported by any prior art reference or any other evidence.

The PTO has the burden under 35 U.S.C. §103 to establish a prima facie case of obviousness. See In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1984). This it has not done. The Examiner failed to cite prior art that remedies the deficiencies of Han et al. or that suggests the obviousness of modifying Han et al. to achieve Applicant's claimed invention.

Instead, the Examiner improperly relied upon hindsight reconstruction of the claimed invention in reaching his obviousness determination. To imbue one of ordinary skill in the art with knowledge of the invention, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1543, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Prior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). Pursuant to MPEP 706.02(a), the Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicants' invention to tilt polygons when the polygons are at least a predetermined

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distance away from a virtual camera. If the rejection is based on facts within the personal knowledge of the Examiner, the data should be supported as specifically as possible and the rejection must be supported by an affidavit from the Examiner, which would be subject to contradiction or explanation by affidavit of Applicants or other persons. See 37 C.F.R. §1.104(d)(2).

In the Response to Arguments section of the outstanding Office Action, the Examiner alleged that "Han discloses transformation characteristics for characters that have been distorted by vision angles and distance." However, Applicant's invention must be considered "as a whole". Medtronic, Inc., v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 220 USPQ 97, 99-100 (Fed. Cir. 1983). Rather than considering the invention "as a whole," the Examiner improperly reduced Applicants, claimed invention to the "idea" of tilting characters using transformation characteristics to reduce distortion. Reducing a claimed invention to an "idea" and then determining patentability of that "idea" is error. Jones v. Hardy, 727 F.2d 1524, 1528, 220 USPQ 1021, 1024 (Fed. Cir. 1984).

Accordingly, Applicants respectfully submit that Han et al. clearly fails to teach or suggest the unique combination and arrangement of elements recited in claims 17, 27, 28 and 31 of the present applications.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 17, 20, 24, 27, 28, 31 and 35 are allowable. Claims 18, 19, 21, 22, 26, 29, 30 and 32-34 depend upon claims 17, 20, 24, 27, 28, 31 and 35; and are therefore allowable for at least the reasons that claims 17, 20, 24, 27, 28, 31 and 35 are allowable.

In view of the foregoing Amendments and Remarks, Applicants respectfully submit that this Application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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